DOCUMENT RESUME

ED 223 042 EC 150 343

AUTHOR Kamien, Janet; And Others
TITLE Is There Life After 504? A Guide to Building and Program Accessibility.
INSTITUTION Children's Museum, Boston, Mass.; National Committee, Arts for the Handicapped, Washington, D.C.
SPONS AGENCY Honeywell, Inc., Minneapolis, Minn.; Massachusetts Council on the Arts and Humanities, Boston.; Massachusetts Developmental Disabilities Council, Boston.
PUB DATE 80
NOTE 48p.; Funds were also provided by the Polaroid Corporation.
PUB TYPE Reports - Descriptive (141) -- Guides - Non-Classroom Use (055)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Accessibility (for Disabled); Administration; Affirmative Action; Design Requirements; *Disabilities; Individual Characteristics; *Museums; Program Development; Program Evaluation; Public Relations; Staff Development

ABSTRACT

Intended for administrators and trustees of cultural institutions, the booklet offers guidelines for evaluating buildings and programs in terms of accessibility to the handicapped, locating and making good use of advisors and consultants, training staff to deal successfully with disabled visitors, taking advantage of the available resources and expertise, working with a wide range of disabilities, and understanding various disabilities and their ranges. Chapters address the following topics (sample subtopics are in parentheses): commitment to accessibility; formation of an advisory board to represent the disabled constituency (selecting advisors, finding advisors, the advisor's role); building accessibility (steps for determining physical accessibility of facilities); exhibit accessibility (visitors using wheelchairs, visually impaired visitors, and hearing impaired visitors); orientation materials (types of materials, the Braille dilemma); program accessibility (communication, the Children's Museum model, services for the retarded); staff training (training program design, questions raised by staff, training strategies); public relations (the teletypewriter telecommunications for the deaf); information about disabilities (physical or orthopedic handicaps, hearing impairments, mental retardation, learning disabilities, emotional problems, seizures); and affirmative action hiring (legal requirements and "reasonable accommodation"). (SW)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED223042

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

Is There Life After 504?

A Guide to Building and Program Accessibility from The Children's Museum, Boston

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Betty Valente
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Developed by

Janet Kamien, Project Coordinator
Amy Goldbas
Susan Porter

Designed by

Signe Hanson
Betsy Howard

EC 150 343

This project was made possible through funds from:

Robert Friedlander
Honeywell Corporation
Polaroid Corporation
Massachusetts Council on the Arts and Humanities
Massachusetts Developmental Disabilities Council

The Massachusetts Developmental Disabilities Council is a state agency responsible for planning and advocating for developmentally disabled citizens throughout Massachusetts. By funding this project the council hoped to support the development of a model project which would demonstrate how to adapt existing systems and resources to better serve the needs of developmentally disabled people.

The Boston Children's Museum is a participatory museum in which hands-on exhibits and teaching practices promote learning by doing. In 1979 the museum moved to a large, centrally located, barrier-free facility, which serves 500,000 people a year. Our goal in this project was to examine our own building and program accessibility in our new facility, and to share with other institutions this experience, and our previous experience in developing curriculum, exhibits, and programs for and about people who have disabilities.

Second Printing, 1982
The National Committee*Arts for the Handicapped

Copyright © 1980 by the Children's Museum, Boston.

Contents

Introduction 1
Making A Commitment 4
Forming An Advisory Council 6
Building Accessibility 9
Exhibit Accessibility 13
Orientation Materials 17
Program Accessibility 21
Staff Training 24
Public Relations 30
Information About Disabilities 32
Affirmative Action Hiring 39

Introduction

This is a book about beginnings. It is meant to help you take the first steps in:

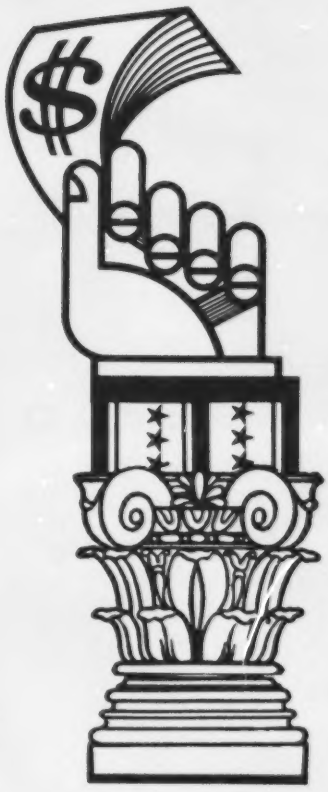
- evaluating your buildings and programs.
- locating and making good use of advisors and consultants
- training your staff to deal successfully with disabled visitors.
- taking advantage of the resources and expertise you already have.
- working with a wider range of disabilities than you previously thought possible.
- understanding various disabilities and their ranges.

It will not tell you *how* to make your institution and its programs accessible because each institution and program is different, but it should give you the tools with which to make your own decisions.

There are lots of reasons why you should examine the question of accessibility. First and foremost is the federal legislation, usually called "504," which requires that all institutions receiving federal funds make their facilities and programs accessible to all people regardless of handicap. If they are not accessible, the government promises to take those federal dollars away. Another financially compelling argument is the possibility of attracting a new untapped paying audience. A good ethical argument is that as holders of the nation's treasures, museums have a serious responsibility to make their collections available to all people. An excellent pragmatic argument is that improved accessibility for a handicapped audience assures improved accessibility for other audiences as well: children, seniors, the temporarily handicapped. But the most compelling argument, and the one that the Children's Museum responded to ten years ago is, "They're coming. Now what?"

Our commitment to serving special needs audiences in a structured way began in 1972 when Elaine Gurian, Director of the Exhibit Center, decided to offer a modified school program for schools and institutions serving handicapped kids. The program was based on an observed need. We could see that the few special needs groups and individuals coming to the museum were not always having a good visit. We were not special educators, we were museum educators and we knew a bad visit when we saw one. At the time, the museum was inaccessible. When groups came with kids in chairs, we carried them up and down the stairs.

The concept for the program Elaine created was based on her experiences in the museum with her severely retarded son. It was clear that:



504

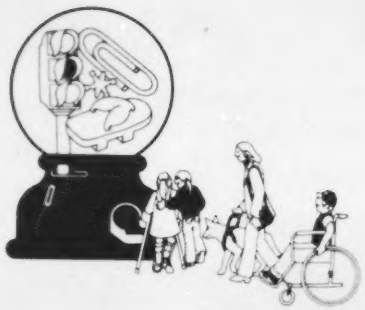
A copy of the 504 regulations entitled *Regulations for Nondiscrimination on the Basis of Handicap under Section 504 of the Rehabilitation Act of 1973* is available from the National Endowment for the Arts, Washington, D.C. 20506. This represents the Arts Endowment's interpretation of the legislation and their timetable for grantees to comply. Interpretations from the Humanities Endowment and other federal funding agencies may differslightly, especially in terms of timetables for compliance. Since some federal agencies are still grappling with interpretation, historic house settings for instance, may not, at this writing, have final word on compliance for their architecturally unique settings. *Access*, the newsletter available from the Arts and Special Constituencies Project, 1419, 27th St., NW, Washington, D.C., 20007, will be reporting on compliance for historic sites and other 504 issues, including program models, technical assistance and funding sources.

He liked the museum, and was excited about the things in it.

He needed help and encouragement every step of the way.

Most of the time, the museum was too crowded and noisy for him.

The museum staff needed some help and information in order to work successfully with him.



The Children's Museum

For a complete description of the Children's Museum program, and information about other programs, technical assistance and funding sources, write: The National Committee/Arts and the Handicapped, 1701 K St., N.W., Suite 905, Washington, D.C. 20006.

Therefore, a program was devised in which:

Special needs groups were invited to the museum for field trips. (They had to be *invited* because special educators didn't necessarily know their kids would enjoy or be welcome at a museum.)

One-to-one staffing by museum interpreters and volunteers was provided.

The museum was closed to other school groups for this program one morning each week.

Museum staff were supervised on the floor and participated in a training and support meeting every week after the children had left.

Over the years, we were rewarded for our commitment to this program in many ways.

Special educators were appreciative and more than willing to help us refine our program.

Special education became the most popular part of our museum interpreter training.

Through trial and error we learned how to serve our special needs audiences better. This program had created a large one.

Universities, schools and other museums began to send their staff to us for training in special education.

All of our staff developed an increased sensitivity to the needs of disabled visitors and, most importantly, they lost some of their fear.

A question one might well ask here is, why would anyone be afraid of a child coming to a museum for a field trip? If the child is disabled, the reasons are many:

Some way or another, I am going to hurt this child. After all, I have no special experience. This child's physical, mental, and emotional needs are going to overwhelm me, even though, or because, I don't know what they are.

Some way or another, this child is going to hurt me. He or she is going to get "out of control." I won't know what to do. I'll be embarrassed. I'll be seen as incompetent. The child will remind

me of all the terrible things that can happen to people's bodies and minds ... to my body, to my children's bodies.

Everyone will see I am afraid. They won't know that I want to help, but don't know how.

The pity I feel for this child will show and hurt us both emotionally.

I owe my allegiance to the "normal" museum visitor. This child's presence is going to ruin their visit.

This child is not going to enjoy my museum. It wasn't designed for this child's needs. If it were, no one else would enjoy it. I'm afraid of this child's disappointment.

We learned by doing. We found out that the things we feared didn't necessarily happen, and if they did, that we could handle and survive them, if we were only brave enough to take the initial risk. We also found that there was a lot of satisfaction in overcoming our hesitation and reaching out to a new audience. And finally we learned that experience with all kinds of visitors made us better educators and exhibitors in general.

Making a Commitment

Welcome to the Land of the Learning Disabled, or, The Children's Museum Mythology.

There seem to be a lot of people around our museum who are learning disabled. Michael Spock, our Director, is one of them. Our private theory about this phenomenon is that a place filled with things to explore and get your hands on, without a lot of reading and writing, is exactly the place where someone with a learning disability wants to be. That pretty well describes our museum.

Michael's Bathrooms

Michael Spock oversaw the entire renovation of our new building from an old wool warehouse to a children's museum. He knew we needed bathrooms that fulfilled the following purposes:

- lots of stalls with lower than average toilets for school children
- cross-sex bathrooms for fathers traveling with little girls and mothers traveling with little boys: too young to go by themselves, too old to go to the "wrong" bathroom.
- a bathroom where it is convenient to change a baby.
- accessible bathrooms for disabled people, with lots of space and higher than average toilets.

He thought it would be inefficient to put accessible stalls with higher toilets in the many-stalled bathrooms meant for school groups who often needed access to a lot of toilets in a hurry, so he devised a plan in which separate, single-stall bathrooms were built that solved the baby-changing, accessibility and cross-sex problems without cutting down the number of available toilets in the school group bathrooms.

MAKING A COMMITMENT

We are addressing this guide to a specific audience: the individual within a cultural institution who has been assigned, or has voluntarily assumed, the task of creating a transition plan for accessibility. Often that person, sometimes called a "504 coordinator," is at the middle administrative level and has taken on this responsibility out of genuine passion for the subject and commitment to the disabled visitor. But the role of coordinator is often a difficult one. The administrators and trustees of an institution may mandate and support the creation of a compliance plan on one hand, while remaining conservative about implementation costs, and museum policy and tradition on the other.

It is natural that such a situation should arise, and we have no easy answers to help you deal with this problem. Developing a broad institution-wide commitment to accessibility may take a great deal of time and some serious political lobbying on your part. But our experience has led us to believe that wherever possible you should approach your administrators and trustees as allies, anticipating their concerns and providing them with practical answers which will help them see the wisdom of making a commitment to a barrier-free institution.

In the introduction we have outlined some of the reasons why an accessible facility and program make good financial sense. In later chapters we make some suggestions for building and program modifications which are less costly than the drastic changes which immediately occur to cost-conscious administrators when access is mentioned.

If, after evaluating your facility and program, you are anticipating expensive changes, you might check into the availability of new sources of funding by corporations and federal agencies not previously tapped by your institution. Over the years the Children's Museum has been funded for projects in this area by such varied sources as The National Endowment for the Arts, The Bureau of Education for the Handicapped, The National Committee / Arts and the Handicapped, The Massachusetts Developmental Disabilities Council, The Polaroid Corporation, and private donors. Generally federal monies are more readily available for program planning and implementation than for major architectural changes.

Remember that *any* proposal written by your institution can and should include funding for items that will allow accessibility. For example, the budget for a new exhibit could include consultation services to assure the physical accessibility of the design, or the production of an audio interpretive cassette for blind visitors. This is one strategy for spread-

ing out the costs of accessibility that can satisfy both your goals and the goals of the institution's financial planners.

As you become more involved with accessibility issues and with the disabled community, there is every chance that you will become "politicized." Your developing consciousness about a society that has seriously limited the rights and opportunities of a significant segment of the population can be useful in moving you and the institution you represent forward. Do not, however, allow this to jeopardize your working relationships within the institution. When you present the recommendations that you and your advisory group have agreed upon, be sure that the suggestions you are making are cost-conscious, practical and thoughtful.

memo

DATE March, 1980

FROM Janet Kamien

TO Mike, Elaine, John Sloan, Nick, Duncan, Betty F., Mary Babine

RE Accessibility Project

The Advisory Council for the TCM Accessibility Project have made a number of suggestions for improvement of access. Some of the solutions cannot be implemented by the project team and require help and/or approval from you:

1) The ramp on the restaurant side should be lit. It is the obvious entrance from the handicapped parking area. We understand that this area is, for the time being, "finished",but Michael feels there may be a chance for light installation when the restaurant reopens. Will Mike, Duncan, and Nick please be aware of this concern and work toward these lights being a part of the renovation contract?

2) Curb cuts are necessary on either side of the driveway off Congress St. on the far side of the bridge. Can John Sloan take care of this?

3) Since our meetings and this memo, Nick has cleaned out the apron parking! Thank You! We know this is a continuing problem.

4) The HP zone in front of McDonald's has been turned into a bus stop. Can John Sloan find out about this?

5) One of the public phones in the lobby must be assisted. A very good example was seen at Eastern Airlines Shuttle at LaGuardia airport. Telephone Company signage included a receiver like this:

Two buttons are on the receiver. One makes the callers voice louder. One makes the callees voice louder. Perfect for our lobby. Can Mary Babine please organize this?

6)We would like to install a TTY for deaf callers. Should this be a shared service? If so, it should be at the switchboard. Is this possible? Although calls will be light, they are more time consuming.

7) Security people must be trained to respond appropriately to HP visitors. We will be in touch with Nick about this.

8) The loading dock area and rear elevator are often crowded. We would like to assure access to the area and elevator by painting zones to be kept clear on the floor. Nick, please respond.

The Disabled Are Perfect

There are many negative stereotypes about disabled people, but there are many 'positive' ones as well which limit our perceptions of disabled people as human and average just as effectively. Many people think of blind people, for instance, as god-fearing and teetotalers, incapable of breaking the law. But these images are no more universally true for the disabled than they are for any other group. One of our top administrators had to be made aware of this.

In discussing accessibility routes through the building, it became clear that people with mobility problems would need to have access through an office section of the museum. He didn't see this as a security risk since "the handicapped people wouldn't steal anything." They probably wouldn't. Most of our visitors probably wouldn't. He needed to understand that in order to view our disabled audience as just another segment of our greater audience, we had to impose similar restrictions as we opened up similar opportunities. This idea surprised him. It had never occurred to him that the ability or inability to steal had nothing to do with the ability or inability to walk.

Forming an Advisory Council

The single most important step you can take to make your institution an accessible and welcoming place for people with disabilities is to form an advisory council to represent that constituency. Advisors can help you look at the physical accessibility and convenience of your facility. They can help you plan staff and volunteer training programs. They can be an invaluable source of information about adaptive equipment and referrals for affirmative action hiring. They can help you develop and maintain a new audience.

Cashing in Your Chits

When forming our advisory council, we were fortunately able to draw on a large pool of resource people we had met during our years of work on the "What If You Couldn't. . ? exhibits, curriculum and book about disabilities. We were not shy in imposing on them one more time to help us with this project. Even if you don't have such a well-developed pool of people, look in your own backyard. There may be members of your staff, your board of trustees, or the school community you serve who have expertise as consumers, family, or professionals — people who know and love your museum and would be willing and able to advise you. If there are any other museums in your area, ask them as well. Katherine Swartz of Plimouth Plantation found several advisors when an article about her accessibility project was featured in a local paper. She also considered running a classified ad and interviewing applicants as one would for any staff position, and suggests that other museums try this route if it seems appropriate.

Politics

There are some political issues that you should be aware of when first beginning to work with your advisory council.

Selecting Advisors

When selecting advisors, it is important to look for some balanced representation, but it is perhaps more important to find people whose abilities and experience are appropriate to the task. Rather than simply selecting one representative from each disability group you have identified, look for people whose roles in the community match the needs of your institution: disabled consumers, people with a professional interest in disabilities (educators, medical practitioners, mental health specialists), parents of disabled children, children of disabled parents, and members of advocacy groups. Consider including some generalists who can advocate across disability categories, and whose broader experience can add to the group.

We Made a Table...

In thinking about the people we would invite to be on our advisory council, we found that a table helped us see the cross-section of skills and representation we had:

Janet—

It looks like this is the representation we have for our advisory group. I think we have a pretty good cross-section- lots of people with professional as well as personal experience.

	consumer	parent/family	professional
Blindness	Sarah, Ray, Roger		Ray, Roger
Deafness	Nancy, Fred	Bill	Nancy, Bill
Mental Retardation	Larry	Lynda	Lynda, David Allen, Bonnie
Mobility	Fred, Karen	Vickie, Derick	Fred, Vickie
		Betsy	Mike
Learning Disability			Betsey
Generalist			Betsey, Roger, Ray, Cynthia, Sarah
Emotional Problems			Bob, Karen

Sue P. 10/23/80

Finding Advisors

How do you find them? Begin by looking to your own staff, or professional groups to which you belong, for referrals. Agencies, schools and parent advocacy groups can also be good resources. Before actually putting together an official committee, you might want to meet individually with potential advisors, to "try out" the relationship.

We feel we were fortunate to find a number of consumers and family members who had professional expertise in disability areas as well as personal expertise.

The Advisor's Role

The role of the advisory council members should be clearly defined from the beginning and your expectations expressed in a straightforward way. Are they to be initiators or respondents? Are they to develop programs or to comment on programs you have developed? Do you expect them to express their opinions honestly? Will they assume that all of their recommendations will be heeded? At the most basic level, make sure people in the group understand that on some issues they will have to agree to disagree, with you and with each other.

It is important to use advisors' time effectively. In some cases that may mean meeting with them individually or in small groups to tackle a specific task, such as designing orientation materials for blind visitors. You shouldn't assume, however, that people in your group will be interested only in the disability for which they are an advocate, particularly if you've been successful at including people who are generalists. If you do meet with advisors individually, you should send the results of those discussions back to the entire advisory council.

Another way to effectively use advisors' time is to assign homework between meetings. If you have designed a special program, for example, send a description out so that they have a chance to look at it before meeting to discuss it. If you have made physical changes in the building based on their recommendations, send out a questionnaire to which they can respond after making an anonymous visit. It is important that they periodically see results of their efforts.

Meetings

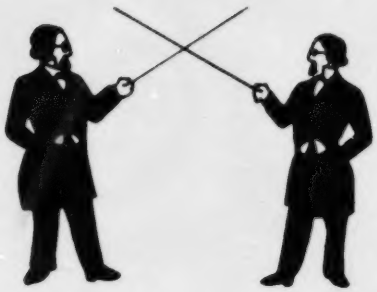
There are some practical considerations that you should keep in mind when working with advisors. Obviously, your meeting space should be accessible. Deaf advisors may need interpretation at the meetings. Ask your deaf advisor if this is necessary, and if it is, ask your advisor for a reliable source for interpreter services. Certified, professional interpreter services usually cost about $10 per hour and must be booked well in advance.

WORDS:

The language used to describe disabilities and people who are disabled can be very sticky for the uninitiated. Not only are the words seen as labels that mask the human identity of the person so labeled, but the meanings they have in common usage may have an insulting feel, just as some words describing ethnic categories do. On the other hand, the new words and phrases created to counteract these difficulties can be confusing to someone who has not grasped the subtlety of the problem. Since the words of choice are often a matter of community or regional preference, such as the use of 'disabled' as opposed to 'handicapped,' there is no easy answer, except to be aware of the fact that someone who uses a wheelchair, for example, may not be pleased to hear that he or she is "confined" to it.

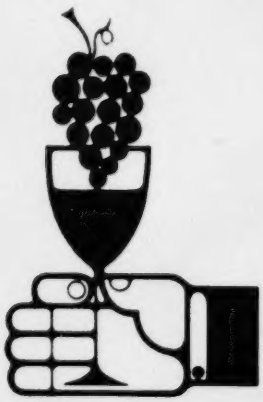
CONFLICT OF INTEREST:

In some cases it is possible that the needs of one disability group may be in conflict with the needs of another. Or, more commonly, available resources may decree hard choices in prioritizing which recommendations will actually be implemented. For these reasons, we cannot emphasize too strongly that you and your advisory council must have clear and reasonable expectations of each other, the institution, and the evaluation process from the outset. It will be up to you to make politically astute judgments when bringing your advisors' recommendations to your institution, and also to make good judgments where conflicting needs are expressed among your advisors. Do not underestimate your own common sense. Prepare your advisors for the probability that not all of their suggestions will or can be heeded, and for your role as final arbitrator of disagreement.



Blind People Have More Fun

Roger and Ray are prone to friendly disagreements. During one advisory council meeting, while arguing a fine point, they challenged each other to a cane duel. Although this is not precisely what we had in mind when we said earlier that advisors must sometimes "agree to disagree" it certainly livened up the meeting!



To Pay or Not to Pay

Paying an advisory council is not only a financial issue, but may be a political issue as well. If there are other advisory councils functioning in your museum that are not paid, it may be a mistake to pay this one. On the other hand, some of the people, especially disabled consumers, may be offended if they are not paid for their time. They may view your request as another instance of an institution taking advantage of them. If you cannot afford to pay them, or can't for some other reason, be clear about this at the outset.

Blind advisors will probably need meeting notes and materials for review in either audio cassette or braille form. Again, ask your advisors. Since cassettes were easiest for us to produce, we asked our blind advisors if this were acceptable. Two of them requested cassettes, and one preferred receiving information in regular printed form.

If most of your advisors don't know each other, you may decide to provide some opportunity to get together socially, shortly after the group is formed. We found that a little wine and cheese helped all of us make it through those evening meetings. We also discovered that it was very useful to invite members of our museum staff who had particular interests in accessibility to one of our meetings. If an exhibit designer and a consumer who uses a wheelchair can meet head on, there is a good chance that each will have a clearer understanding of the limitations and possibilities of the other.

The basic premise in forming an advisory group is that you will find people who can be allies of your institution, supportive of your efforts to include disabled people in your programs and willing to assist you at every level. If you are as fortunate as we were in finding people whose commitment, to the museum and the entire community it serves, was great, you will have found a valuable resource.

Building Accessibility

When the subject of accessibility for disabled people comes up, the first thing that comes to mind is architectural accessibility for people who use wheelchairs. The second is the financial impact of turning stairs into ramps, installing elevators, and building accessible bathrooms. There is no doubt that this is an important subject; however, an obsession with ramps and what they cost can create more problems than it solves. First, it is assumed that the only way to provide physical accessibility for wheelchair users, even on a temporary basis, is "by the book." Creativity is limited and advice from consumers is neglected when decisions are made on this basis. And one's worst fears are realized: the "book's" solutions are, in fact, often very expensive. Second, the quality of the experience that is offered may be neglected. Once a monumental effort is expended in getting the consumer *into* the building, the accomplishment may be so satisfying that whether or not a person in a wheelchair can see into a case or read labels is forgotten. Finally, the accessibility needs of other disabled people, and sometimes the needs of the nondisabled as well, may be ignored. The idea is to create an environment that is comfortable for everyone and that offers opportunities for learning and growing for everyone; and not to ramp everything in sight and call it a day.

Therefore, when attacking the physical accessibility of your building we suggest you:

1. Read some material that explores accessibility issues for a range of disabilities. We have found that *Architectural Accessibility for the Disabled of College Campuses* by Stephen R. Cotler, R.A., and Alfred H. DeGraff presents a clear, concise view of accessibility issues for a range of disabilities. It is available from State University Construction Fund, 194 Washington Ave., Albany, N.Y., 12210.

2. Make sure that your advisory board members are able to fairly articulate the broader needs of the disability group they represent. For instance, an advisor who was born blind will probably have different needs than someone who became blind later in life. Is your advisor aware of the general issues?

3. Take a look at an evaluation questionnaire. These can be a bit overwhelming, but if you use them selectively, they can be quite useful. The questionnaire is essentially a way to get a grasp on the areas in which you need to work. Check with your state's architectural accessibility board for a questionnaire that reflects your state's laws and codes. If the requirements of the state codes differ from the federal codes, you will be expected to comply with the most stringent. An even more useful way to assess the physical problems of your building is to ask members of your advisory board and other disabled consumers to pay unannounced visits. Provide them with a questionnaire or cassette recorder so that they can record their observations of physi-

Good Idea About Those Bathrooms, But Look How They Built Them!

Remember *Michael's Bathrooms?* They were supposed to be accessible, private, and a good place to change your baby? Well, it's now clear to us that architects don't know the first thing about changing babies, or about combing one's hair while sitting in a wheelchair. You can get a wheelchair under the changing table, but you can barely see yourself in the mirror above it. And the changing table is nowhere near the sink, nor does it have a lip to prevent the child from falling off (a long fall — remember, this changing table is "wheelchair accessible") while you are on the other side of the room trying to get some water. The biggest problem is that installing an appropriate changing table would make the room inaccessible! We haven't solved this one yet, but we are working on it.

Overheard in a Bathroom

CHILD: Is this a different bathroom from the other one?
MOTHER: Yes it is. They have all kinds of bathrooms in the museum because they know that all kinds of people need to go.
CHILD: Ohhhh.

Card Readers and Elevated Confusion

Just because you have managed to get an elevator, that doesn't mean your problems are over. Here are some of the difficulties we have had with ours:

Our elevator is too small to be used by the nondisabled public, so we have tried to limit access by informing visitors that it is for staff and disabled visitors. But we and our advisors don't like a lot of signs saying "handicapped this way, everyone else that way." We would also like the signage to include older people, who don't view themselves as 'disabled' but do need the elevator. So our signs say "visitors who have difficulty with stairs may obtain an elevator pass at the desk." This would work well if all parents who came to the museum with strollers (and there are a very large number) didn't think that sign included them. Back to square one.

Our elevator goes not only to floors with offices, but also to the Museum of Transportation which has a separate admission. We therefore have card readers in the elevators which prevent people without cards from using the elevators at all, and limit people with cards to certain floors. Because our desk and ticketing is on the second floor of the building, disabled visitors to the Children's Museum must buy their tickets and obtain their cards from the Museum of Transportation desk on the first floor. Confused yet? So are we.

cal problems, responsiveness of staff, orientation needs, etc. After their visits, interview them individually or at a meeting. Ask them how it *feels* to be a disabled visitor in your museum. Ask them what they felt they missed, either because they couldn't get at it or because they didn't have the tools to understand it.

ASSESSMENT OF PHYSICAL AND PROGRAM ACCESSIBILITY TO HANDICAPPED INDIVIDUALS

Page 2

	Yes	No	Remarks
8. With interested persons (see #6), have you made plans to modify programs and facilities to insure accessibility?			Such plans must be kept on file for three years.
9. If structural changes are necessary, have you produced a written document describing the strategy for making such changes?			*These "transition plans" should be developed with "interested persons" and maintained for public inspect.*
PHYSICAL FACILITIES			
10. Are there designated parking stalls close to the building for use by individuals with physical disabilities?			
11. Are the parking spaces large enough to allow individuals in wheelchairs or on braces adequate space to get in and out on a level surface?			*Recommened 12 foot width per single space, 20 foot for two spaces.*
12. Are the number of reserved spaces adequate for frequency of parking needs by the disabled?			*Recommended minimum of 2 or 2 percent of total number.*
13. Is there a height restriction for entrance to parking area?			
14. If 'employee parking' only, can disabled arrange to use the facility?			*Does the public have information on this service?*
15. Are public walks at least 4' wide with a gradient not greater than 5 percent?			
16. Are walks free of curbs, or if curbs exist are there curb ramps or cuts?			
17. Are walks of a continuing common surface, not interrupted by steps or abrupt changes in level?			
18. Is the path free of hazards or are the hazards identifiable?			
19. Do walks have a level platform at the top which is a) at least 5 feet by 5 feet if the door swings out or b) 3 feet by 5 feet if the door does not swing onto the platform?			
20. If an entrance has a series of doors, do both doors swing the same direction, or is there adequate space between them?			*Preferably, all entrances would be accessible; if not is a main entrance accessib. and so identified?*
21. Do all doors have a minimum clear opening width of 2 feet 8 inches?			
22. Are the door operable by a single effort?			

Dear Advisory Council Member,

Enclosed please find passes for your first visit to the museum and an evaluation form. We hope this form will serve as a guide to the kinds of questions and concerns we perceive in this project.

Please send this to us before December 5th. We will then synthesize all comments we receive and present them at the first meeting. Enjoy your visit!

****

OUTSIDE BUILDING ACCESSIBILITY

problems: _____

strong points: _____

INSIDE BUILDING ACCESSIBILITY

physical layout: _____

mobility: _____

floor surfaces: _____

EXHIBITION METHOD

graphics: _____

furniture: _____

ease of mobility: _____

content: _____

STAFF

How well did they interact with handicapped visitors? _____

What do they need to know? _____

WHAT AIDS SHOULD BE AVAILABLE

handouts? _____

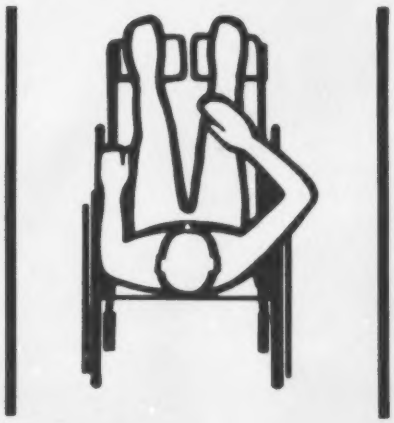
raised line map? _____

What should we have that we don't at this time, that would add to the visitors' ease and enjoyment of the visit? What needs to happen for a more comfortable atmosphere(i.e. both specific to a disability, and generally)?

4. Be creative in your problem solving. Is there a way to use the freight elevator for accessibility? Is it cheaper to create new, single-stall accessible bathrooms than to tear up and adapt old ones? Is it more efficient to ramp a side or back entrance than a front one? Is it possible to ramp a single route through the museum rather than to ramp all difficult thresholds and small stairs? Work with consumers! Most disabled people will not be offended by the use of a side or back entrance if they are not made to feel like second class citizens by the institution and its staff when they use it.

5. Remember that you are occasionally walking a thin line. Be careful that your advisors are not so used to institutional abuse that they are happy with anything at all and fail to tell you what they really need and

One last complication is the fact that our elevator doubles as a loading dock. Besides the fact that disabled visitors sometimes wonder if they have come to the right place, loading docks are messy places. We have made a dent in this problem by painting bright yellow lines culminating in an overhead view of a man in a wheelchair directly in front of the elevator doors. The lines demarcate the space that must remain clear for accessibility. The folks who work at the loading dock have named the man Waldo, and have been conscientious about keeping crates and boxes out of Waldo's way.



Safety

Although there are no increased insurance or safety risks for handicapped visitors, there are some safety issues that should be mentioned. Consider installing a visual as well as auditory fire alarm system. Planning for the evacuation of disabled staff and visitors should be included in your fire drills. This may involve making staff available to help people in wheelchairs down the stairs, as elevators are usually considered unsafe during a fire emergency. Check with your state accessibility board for specific guidelines.

want. There is a difference between compromise and resignation; it will be your job to see that difference. Also beware of the other side of the coin: sometimes people are rightfully so angry at how they have been abused that they will settle for nothing less than perfection. Unless compromise can be reached, work comes to a standstill and no one is served.

6. Beware of architects. We have been surprised at how little of the spirit and the letter of 504 has become a working premise for most architects and builders. If they know anything about the legislation, they are often the most ardent proponents of the 'one solution' (usually the most expensive) theory. Look for an architect with experience in this area. Familiarize yourself with 504 and work closely with your advisory group so that you can respond intelligently.

7. Check all physical solutions with your advisors before you produce them and make sure they understand what you are proposing. Someone who is an expert at presenting the needs of a disability group may not necessarily be an expert at reading blueprints.

The Famous Post in the Famous Stairway

Although great attention was paid to the accessibility of our building during renovation, an unforeseen obstacle appeared at the opening party. There is a post in the middle of our main staircase which could not be removed because it holds up the building. It is two feet away from the railing and was, unfortunately, not incorporated into the railing design. Nobody thought much about it. Books about accessibility do not usually find it necessary to point out that a post in the middle of a staircase is a hazard. We found out when a blind friend of the museum walked into it on opening day. We are trying to have an enclosure made for it and hope in the meantime that no one else walks into it. Welcome to our new barrier-free facility! How embarrassing!

Exhibit Accessibility

As we mentioned in the previous section, simply providing access into and around your building does not necessarily insure that a disabled visitor will find the visit a worthwhile experience. Here are some issues about physical accessibility within exhibits that bear thinking about:

Visitors Using Wheelchairs

For wheelchair users, think about height and maneuverability. Probably the best way to consider this issue is from a wheelchair. Try touring your museum in a wheelchair (use the one you should have available at your admissions area!) and look for the following problems:

- Can you comfortably see the artifacts and read the labels in the exhibit cases and on the walls?
- Is other signage, such as directions, maps, bathroom signs, etc., at a comfortable height?
- If there are maze-like or cul-de-sac exhibit areas, can you easily negotiate them in a wheelchair?
- If there are buttons to push or directions to read, are they within your sightline and grasp?
- If there are activity tables, can your wheelchair fit beneath them and still allow you to manipulate the materials? Can you pull up adjacent to the table and comfortably use the exhibit?
- Are you having a good time, or is this just an incredible hassle?

The things you need to change should be fairly apparent. Again, call your advisory council in and see what they have to say. Obviously, dealing with such problems should begin in the design phase with your own design and production department or with outside exhibit firms your museum hires. But designers, like architects, do not yet necessarily have any expertise in designing for disabled populations, so you will probably have to help them out.

If there are simple, inexpensive things you can do, such as moving labels around in an exhibit case, began there. Try to participate in the ground-floor planning of any new exhibit or installation, so that you can point out the simple changes in usual design procedures that can be made to enhance accessibility. Try to get access to exhibit plans before they are produced, so that you can make suggestions before production begins. Encourage exhibit designers and planners to make the same wheelchair tour that you have made. This kind of experience often allows people to understand what you are talking about much better than complaining or politicking.

The Japanese Home Dilemma

The Japanese Home in the Children's Museum presented our biggest accessibility problem. Not only is the first level of the house set two feet off the floor, but there is not enough space to build a safe ramp up into the house. (In order to be safe, a ramp must have a gentle slope: 12 inches in length for every inch of elevation is generally accepted.) In any case, a permanent ramp leading to the floor of the home would present an inaccurate idea of what a traditional Japanese home looks like, which is the purpose of the exhibit. In addition, the tatami mat floor of the house could not bear wheelchair traffic; ambulatory visitors must remove their shoes before entering. It looked like we were stuck.

We asked a Japanese consultant what people in Japan do about this problem. We were told that people using wheelchairs are helped to transfer directly to a floor cushion where they can then push themselves around on the slippery tatami surface with their arms or be pulled by others. So we came up

with two solutions: we taught the museum's interpreter staff how to remove the grillwork on the front of the house, and how to help people transfer. Now people using wheelchairs have the option of staying on floor level and having a clear view into the house and the program taking place inside, or of transferring onto the floor of the house with the help of an interpreter.

Such relatively easy solutions are not always possible when one is attempting to make an historical/traditional building or exhibit accessible while trying to preserve the very elements about the place that make it special and worth seeing. For more help about historic settings read *Access to the Past* by Alice P. Kenney, from the American Association for State and Local History, 1400 8th Ave., So., Nashville, Tenn. 37203. Remember, there may be some helpful if not perfect solutions by thinking about viewing points, partial access, and audio-visual, program, or substitute activities.

For people who have other kinds of mobility problems that prevent them from moving along quickly, or cause them to tire easily, make sure that there are resting places in your building or exhibit areas. Parents with young children will appreciate this, too.

Visually Impaired Visitors

For visually impaired visitors, the problems are usually more complicated, and there are some things in your museum that will probably always remain inaccessible to this population. But there are some physical solutions you should think about.

1. When you are labeling, take large print specifications into consideration. Even if all the information about an object in a case can't be enlarged to these specifications, perhaps some of the most important information can. Remember that black lettering on a white background is easiest to read, and don't forget about lighting: if the case contents or labels are poorly lit, you will have defeated your efforts.

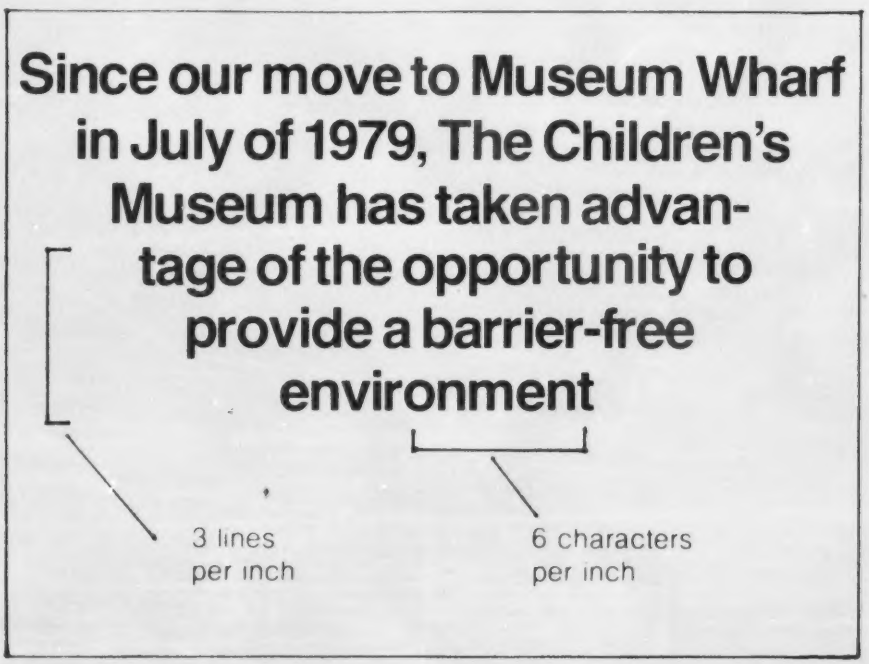
LARGE PRINT SPECIFICATIONS

From the National Braille Association's *Manual for Large Type Transcribing*:

Type size should be no less than 18-point.

Type face should be a heavy, broad sans serif. (A good example of this is Helvetica.)

There should be no more than six letters per horizontal inch and three lines per vertical inch.


Since our move to Museum Wharf in July of 1979, The Children's Museum has taken advantage of the opportunity to provide a barrier-free environment
3 lines per inch
6 characters per inch

2. Try to include tactile components in your exhibits. Expendable original fragments, objects that would normally be used in loan exhibits or teaching collections, contemporary but real artifacts (for example, pieces of handwoven cloth), or blatant reproductions and models can add immensely to the visit. These items can be made available to everyone by building them into an exhibit, or they can be included in a kit that museum staff use for special programs.

3. Work with the curatorial staff to make reasonable decisions about which objects can be touched and how they can be touched. Some objects are too valuable, too fragile, or too old and irreplaceable for visitors to have tactile or perhaps even visual access to them. This is an indisputable fact. However, many objects can take limited, gentle, supervised handling by visually impaired visitors. Some of these objects may need to be protected from oil and dirt particles by asking visually impaired visitors to wear thin, cotton gloves. For more about these kinds of tours see "Who Washes The White Gloves?" in the program accessibility section.

4. Think about participatory exhibitions as a regular feature of your museum. By this, we are not suggesting a special gallery for the blind, but rather changing exhibit areas that have a tactile and auditory focus as well as a visual focus. Almost all of the exhibits in the Children's Museum are designed in this way, because we feel that all people, regardless of age or ability, learn better when they are active participants. However, other museums who do not or cannot have this kind of participation as a regular part of every exhibit have created areas of exhibition in which this kind of interaction is possible. Some notable examples are the Tide Pool Exhibit at the New England Aquarium, the Discovery Room at the Field Museum in Chicago, and the Lion's Gallery of the Senses at the Wadsworth Atheneum in Hartford, Connecticut.

Hearing Impaired Visitors

For visitors who are deaf, the biggest problems will probably arise in the area of communication. This is an obvious difficulty when thinking about your staff's inability to communicate in sign language when giving directions or a tour, but an equally important though much more subtle issue, is your use of the written word in labeling, touring, and orientation materials. An excellent guide to help you revise vocabulary and sentence structure that may be unfamiliar or confusing to adults who are deaf has been prepared by Connie Jacobson at the Museum of Fine Arts in Boston. It's called *Language Adaptations for Use by Deaf Audiences*, and is available from the Education Department, Museum of Fine Arts, 465 Huntington Ave., Boston, MA 02115. Another manual written with children in mind is available from Nan Decker, The Caption Center, WGBH—TV, Boston 02134.

Air and Space

The Air and Space Museum of the Smithsonian Institution has done a great deal to make their museum accessible. Much of their collection consists of airplanes, which are displayed out of the visitors' reach. For blind visitors, even the planes that are within reach are difficult to conceptualize because of their giant scale. To help with this problem, tactile thermaform sheets are available so that the shape of objects can be felt and understood on a smaller scale. They have published some materials you might want to review. Their booklet, *Museums and Handicapped Students: Guidelines for Educators*, is available from: Coordinator, Programs for the Handicapped, Room 3566, National Air and Space Museum, Smithsonian Institution, Washington, D.C. 20560.

The Field Museum

Like many large museums, the Field Museum in Chicago has been experimenting with more tactile approaches. They did not install their Discovery Room or Pawnee Lodge to satisfy accessibility problems, but have found, as we did, that participatory exhibition is a terrific learning tool for everyone. The fact that it serves the disabled audience well is a bonus that they are now discovering.

Animals and the Great Outdoors

The biggest accessibility problem faced by outdoor museums is often the trails and walkways through the grounds. These are sometimes rugged because of grade and texture, and may be quite expensive to pave. Zoos, marinas and aquariums have an additional problem with the almost total tactile inaccessibility of their collections. The New England Aquarium has an interesting tide pool exhibit in which animals like starfish, snails and horseshoe crabs may be handled by visitors. The exhibit is not without problems: visitor squeamishness, injury to the animals, etc. However, it's still a great idea. Zoos with special areas for children where gentle handling of gentle animals is possible, obviously have a great advantage in terms of serving the blind visitor. Do not, however, underestimate the pleasure and learning for a blind visitor even without such an area; hearing a lion roar or walking through an aviary can be very exciting as well. And do not underestimate the power that models, or being allowed to handle pieces of skin, claws, teeth or bones, can have for your whole audience. There are two pamphlets that may be useful for people planning outdoor areas:

Interpretation for Handicapped Persons, a Handbook for Outdoor Recreation Personnel, by Jaque Beechel, National Park Service, Pacific Northwest Region, Cooperative Park Studies Unit, College of Forest Resources, Seattle, WA 98195.

Barrier Free Site Design, U.S. Dept. of Housing and Urban Development, Office of Policy Development and Research, Washington, D.C.

Benefits

While you are improving accessibility for disabled visitors, remember the rest of your audience. You will probably find that other visitors will be better served as well.

Good sightlines for wheelchair users will usually be good sightlines for children.

Simplified language for deaf visitors will be better language for children, and in fact, your general audience as well.

Large lettering for visually impaired people will be great for children and for many older people, too.

Tactile components you put in will definitely excite your entire audience.

But, keep in mind who your audience is! We decided, for instance, that although one of our advisors, Fred (who uses a wheelchair), could not get very close to one of our activities because the table was too low, the table height was perfect for kids using wheelchairs and ambulatory kids. The table, therefore, remained unchanged. We made a mistake in our "What If You Couldn't...?" exhibit in the TTY display: although an adult wheelchair fits under the table, it is too high for everybody to use: neither people in wheelchairs nor ambulatory kids can see the top of the TTY!

Orientation Materials

Once you have insured physical accessibility throughout your building and within exhibits, you should take a look at the orientation materials you provide to your general audience to make sure that they meet the needs of disabled visitors. These may need revision to include information about special programs, facilities such as accessible bathrooms, wheelchair routes, audio tours, parking -- whatever modifications you have made or alternatives you have provided to insure access.

The most important guideline to consider as you prepare orientation materials is that they should simplify, not complicate the visit for your audience. Your map shouldn't require a map to be deciphered. Bearing this in mind, you might begin by asking your advisors to help you pay particular attention to the orientation problems of your facility. Better still, ask several disabled people who are unfamiliar with your museum to pay a visit and then discuss any difficulty they had finding their way around.

We have never made maps or other printed guide materials available to the public at the Children's Museum. Visitors often request maps, but we have chosen to make them available in the form of large directories on the walls of each of the exhibit bays. We realize however, that these directories do not always meet the needs of disabled visitors so we have designed three different handouts which are available at the admissions desk. These are low-cost materials which can easily be modified to reflect changes in the facility and exhibitions. Since these materials aren't available to the non-disabled public, we have trained our staff who work at the admissions desk to identify visitors who might need them and offer them where appropriate.

For visually impaired visitors we have written what is essentially a verbal map: a description in large print of a route through the museum, mentioning the subject of each exhibit area, and describing the location of bathrooms, the shop, and other resources. The same text was reproduced in braille as an insert for the large print hand-out. We ordered fewer copies of the braille guide, in the expectation that the number of blind visitors skillful at reading braille would be relatively small.

Because of space limitation, this handout doesn't describe in great detail the content of each exhibit or activity. An audio cassette tour didn't seem appropriate to our participatory exhibition. We decided instead to make a cassette available in the library section of the museum, which gives a more detailed and entertaining orientatior to the blind visitor who wants to know what to expect before entering tne exhibit area.

Separate But Equal?

The biggest disagreement we had with an advisor was about how the orientation materials would be designed. Roger felt strongly that we should not separate our materials into three separate handouts as we have described. He thought that all the materials should be integrated into one handout that would be reproduced in large print with braille printed over. Although we agreed with his reasoning — all handout material could be distributed to everyone — and we found this argument politically appealing, it was financially unfeasible. We simply could not afford to have that much paper distributed, that much large print done, or that much braille embossed. Nor did we think that our visitors who read braille would be particularly interested in a lengthy description of how to enter the Japanese home in a wheelchair, although, as Roger pointed out, it is possible to be blind and need a wheelchair as well. In the end, we agreed to disagree. We respected each other's points of view enough to find that there were no difficult feelings about the disagreement when it was over.

3-D

Another orientation possibility for blind visitors is a three-dimensional model. Although we haven't tried this yet, we will be experimenting with it soon. The questions we are asking ourselves are:

Where should we keep it so that blind visitors can easily find it?

Should it be available to everyone? Some of us feel it might be a good aid for learning disabled visitors, or mentally retarded visitors, or anyone who finds a large new space confusing. This is a good idea in theory, but can we really make it indestructible enough for that much handling?

How to detail its design? Should it come apart by floors? Should the areas within it be brailled? Marked in large print as well? Should it sit on a table or be mounted on a wall? What should the scale be?

We think that if we can answer these questions, a three dimensional model will be an excellent additional aid for our visually impaired visitors.

The Braille Dilemma

Braille is a dilemma, because it is so hard to know what and how much to put into braille. For people who can read it, it's very useful, but unfortunately, a large percentage of people who are blind do not know braille. We made the decision to braille relatively few of our materials and graphics. What we have brailled is the bathroom door signs, the elevator panel (which also has large raised numbers), and the orientation handout. We plan in the future to braille some discrete items in certain exhibit areas, such as drawers that when opened have artifacts that can be touched.

We talked for a long time about the possibility of creating a tactile map for our blind visitors. However, all three of our blind advisors told us that they couldn't read one. Apparently there are no common guidelines for the production of tactile maps and they are generally used only in situations in which they can be studied over time, for instance for blind students orienting themselves to a large university campus. Although we found this wasn't appropriate for a one-shot visit, an excellent guide does exist to help you create a tactile map if you find it meets your needs: *The Preparation of Orientation and Mobility Maps for the Visually and Physically Handicapped,* F. Cuthbert Salmon, Oklahoma State University School of Architecture, Stillwater, OK 74074.

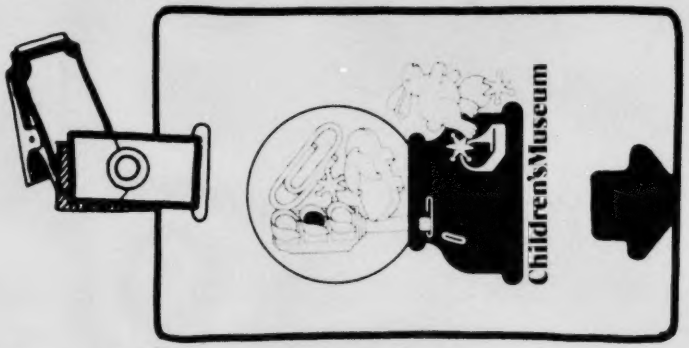
For physically handicapped visitors, we developed a separate map and guide which explains elevator access, locates accessible bathrooms and describes access to the Japanese House, the only exhibit which is partially inaccessible.

A third hand-out was written with deaf visitors in mind. It has several illustrations, some brief descriptions of a few exhibit areas, and the location of our TTY-TDD and assisted telephones.

Welcome to the Children's Museum

We hope that the map on the back of this sheet will help make your visit more enjoyable.

You may obtain elevator passes and other assistance here at the desk.



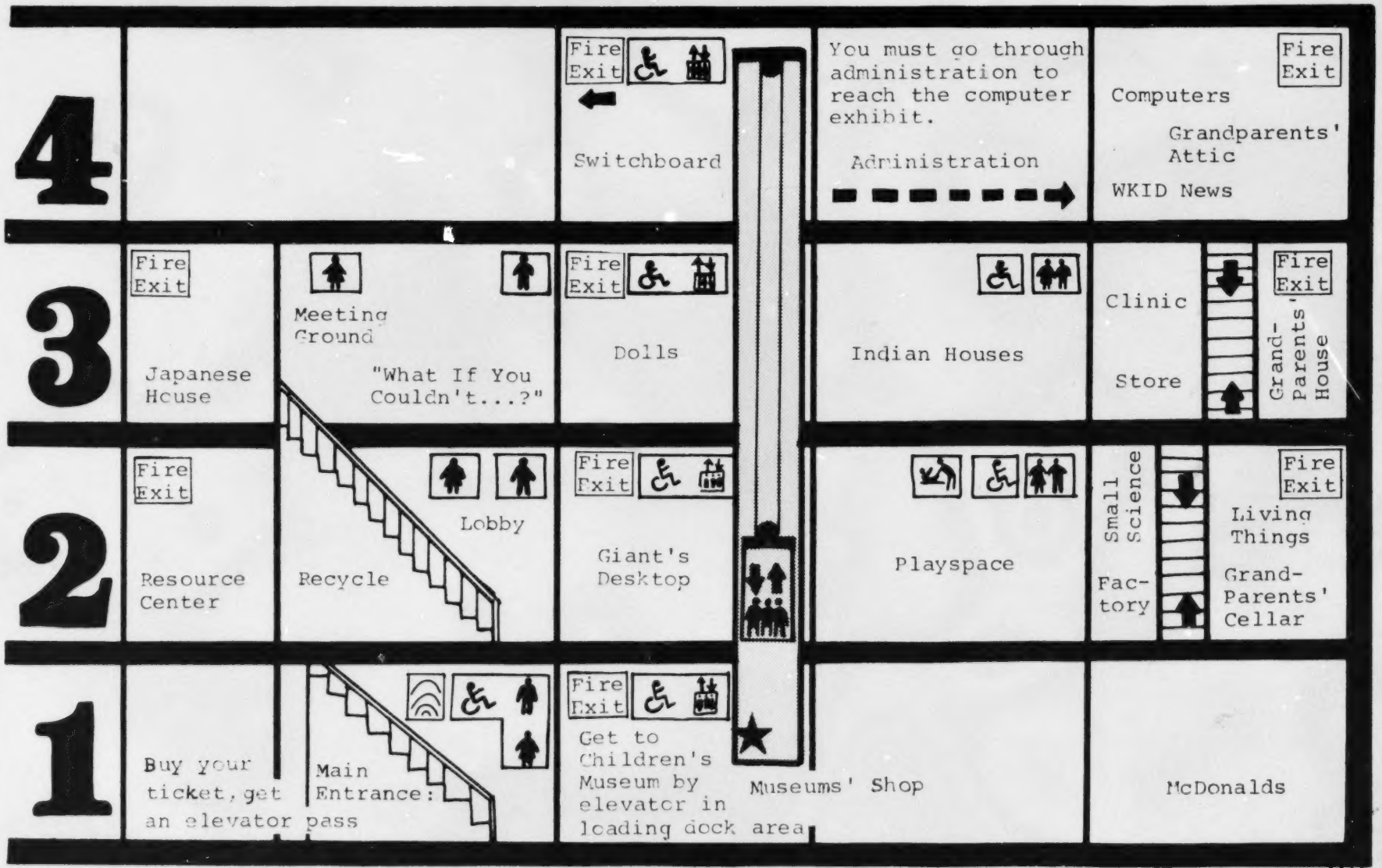
There are instructions for using the passes next to the elevator on each floor. The elevator and accessible bathrooms are marked on the map.

HP Parking is available in front of the building.

All exhibits are accessible with the exception of the interior of the Japanese House. A good view into the house is available from the exhibit area, but the interior is not accessible because shoes, wheelchairs and crutches can damage the tatami mat floor. In Japan, people who use wheelchairs have access to areas with tatami mats by transferring onto a cushion and propelling themselves by arm movement or being pulled by others. If you wish to try this our staff will be happy to assist. Please inquire at the desk about tours.

Please let us know if these materials are helpful and how we can make your visit more enjoyable.

DIRECTORY


4
Fire Exit
Switchboard
You must go through administration to reach the computer exhibit.
Administration
Fire Exit
Computers
Grandparents' Attic
WKID News
3
Fire Exit
Japanese House
Meeting Ground
"What If You Couldn't...?"
Fire Exit
Dolls
Indian Houses
Clinic
Store
Fire Exit
Grand-Parents' House
2
Fire Exit
Resource Center
Recycle
Lobby
Fire Exit
Giant's Desktop
Playspace
Small Science
Fac-tory
Fire Exit
Living Things
Grand-Parents' Cellar
1
Buy your ticket, get an elevator pass
Main Entrance:
Fire Exit
Get to Children's Museum by elevator in loading dock area
Museums' Shop
McDonalds
Women's Room
Men's Room
Handicapped Access
Baby Changing
Elevator
Fire Exit
Emergency Stairwells
Assisted Phone

Program Accessibility

Physical and exhibit accessibility precede program accessibility in this guide only because they are logical first steps. Designing programs which are fully available to all members of the disabled community is equally important and may have an even greater impact on achieving the goals of accessibility. Moreover, improved program accessibility is in many cases an excellent way to provide access when physical access to certain exhibit areas or artifacts is impossible.

There has been a great deal of confusion about legal requirements in the area of program accessibility. Section 504 states that the general public cannot demand access to special programs set up for a disabled audience, but the disabled visitor *can* ask for equal access to all general programs or reasonable alternatives of equal interest and value. This means that a sign language tour or a school program for visually impaired children does not have to be opened up to the general visitor. It does not mean, however, that special programs must be produced on demand for the disabled visitor; if sign language tours are given on Wednesday, a visitor on Monday cannot insist that an interpreter be made available.

When you examine your museum for program accessibility, begin by looking critically at the program you now offer. At the most basic level, is the space for workshops, courses and lectures physically accessible? If not, can you offer programs of equal interest in an accessible space? If there are exhibit areas that are inaccessible, can you offer some alternative experience — video, a graphic display, photographs — which allows a disabled visitor access to the content of the exhibition?

Beyond looking for ways to include disabled people in your regular program, you may want to design special services, particularly for visitors who are deaf, blind, or mentally retarded. It may be helpful to look at what other museums have done.

Communication

The Oakland Museum in Oakland, California has a highly developed docent training program in sign language interpretation. Docents take an intensive series of sign language and gallery-related classes so that they are equipped to guide deaf visitors, both in terms of their communication skills and their museum expertise. To achieve this kind of fluency in sign language is a tall order for most museums and docent staffs. Therefore, you may want to investigate hiring professional interpreter services to interpret your regular tours on a periodic basis.

Connie Again

For deaf visitors, self-guided tours using written information are another good way to bring programs to this audience, particularly when an interpreted tour is not available. Constance Jacobson at the Boston Museum of Fine Arts has written six language-adjusted guides to several galleries and exhibits. Write the Museum of Fine Arts, Boston, MA 02115.

Speaking of (In) Sign Language

It takes a great deal of time and practice to achieve minimal fluency in sign language, particularly if you are attempting to interpret something as unfamiliar to many deaf visitors as the subjects presented in most gallery tours. If some members of your staff are interested in learning, however, it can be as useful to your institution as having staff members who are able to speak any other second language. Even if your staff learns only the most elementary signs, as ours does, it will allow them to greet and assist a deaf visitor who comes when special tours are unavailable.

Another Note About Programs for Deaf Audiences

In our technological age, many of the programs we offer are presented through audio/visual or audio means. This obviously excludes deaf visitors. In some of these situations, captioning may be the answer. Many films available for purchase or rental are being captioned as general awareness of this problem increases. For museum-produced slide tapes there are several possibilities, depending on length, budget, and how the production will be used. If the production is to be captioned, you may

need to enlist some expert help. Be sure to read Connie's oft-mentioned book, but also attempt to contact a television station or film distribution captioning department before endeavoring to do it yourself. If an outside firm is producing the material, be sure to get captioning into your budget, and make certain that they know what they are doing.

Another possibility is to provide deaf members of your audience with a written script. Again, check your language and sentence structure. The script should probably not be a word-for-word rendition of the audio portion of the presentation.

For special events, such as lecture or slide show presentations, consider hiring an interpreter. Remember that an interpreter has to be seen in order to be understood, so if the room or auditorium must be darkened for the presentation, a light source should be provided for the interpreter.

To Touch or Not To Touch

Both Marianna James of Winterthur and Eleanor Rubin of the Museum of Fine Arts needed to work quite carefully with their respective curatorial people to make the tours we described available to blind visitors. In Marianna's situation, some ceramic and glass objects are not protected in any way. These may be rotated off the "touchable" list from time to time to prevent damage from frequent handling. Other objects, primarily furniture, are waxed for protection of the surface. Still other objects, primarily metal, are coated with a reversible lacquer. This means that the lacquer can be dissolved, removed and reapplied to the object without damage to it. In both situations, a limited number of artifacts is available for tactile exploration, and then only for people who are blind, in a supervised setting.

In either case, check with your advisory council, and schools and organizations for the deaf in your area, before you launch a new program. Try to clarify the needs and size of your potential deaf audience. Review your exhibition and current tours to see what areas will work best. And publicize interpreted programs faithfully and well in advance, directly to the deaf community.

If groups of deaf children or adults use your facility, think about ways to work most effectively with the interpreters who come with the groups. A packet of pre-visit information, or a brief meeting with the interpreter before the visit will prove useful.

Who Washes the White Gloves?

We know of two interesting models for tours for blind visitors. At Boston's Museum of Fine Arts, blind visitors may take a 'white glove' tour. The tour leader takes visitors through galleries in which some objects have been selected for gentle tactile exploration by blind visitors wearing thin cotton gloves. Eleanor Rubin and Constance Jacobson, the developers of this program, worked long and hard with the museum's curatorial staff to get this program off the ground. At this stage, a docent is available to give these tours with prior notice. Visitors may also take the same tours independently, using audio cassettes.

Another program that resulted from careful work with curators is the tour program available at the Winterthur Museum and Gardens in Delaware. In this case, blind visitors are invited to participate in ongoing tours with sighted visitors and are not required to wear gloves. Docents are trained to make specific objects available for supervised handling. Sighted visitors are not invited to touch the objects.

The Children's Museum Model

The Winterthur program is a good model because it not only serves blind visitors well, but it serves them in an integrated setting. This kind of situation is not always possible, and in some cases may not be preferable. Our own special needs school group program at the Children's Museum is a case in point. We run this program once a week during the school year. It differs from our usual school programs in the following ways:

- We accept 30 instead of 200 children per group.
- We offer one-to-one staffing and have 30 staff available.
- We accept only reservations for special needs groups.
- We accept reservations for groups of adults.

Special education groups are able to choose the regular school group

program if they wish, except in the case of adult groups. But most groups prefer the individualized visit.

The best thing about the Children's Museum program is that one-to-one staffing allows us to serve everyone, regardless of the severity of disability. Probably half of our visitors in this program are retarded or multiply-handicapped. Individual attention allows us to encourage interaction, focus attention, and overcome communication problems in ways that would not be possible in a group situation.

Serving Retarded People

There is, however, an excellent model that relies neither on one-to-one staffing nor on participatory exhibits, at the Metropolitan Museum of Art in New York City. Charles Steiner developed tours for mentally retarded adults, using the same galleries, artifacts and rules that apply to any other visitor to the Metropolitan. For an excellent documentation of this program write for *Museum Education for Retarded Adults, Reaching Out to a Neglected Audience* by Charles Steiner, Assistant Museum Educator, Department of Community Education, The Metropolitan Museum of Art, Fifth Avenue at 82nd St., New York, N.Y. 10028.

The Program That Wasn't

Disabled people are demanding their rights, and that's good. However, an experience at the Children's Museum showed us that sometimes demands are made with little understanding of the accommodations that an institution has made.

One day a blind woman came to our front desk with her sighted companion and said that we'd better open all our exhibit cases so that she could handle the collection objects they contained. If we weren't willing to do this, she promised to sue us for discrimination. The desk staff person called the floor manager in a panic. The floor manager called Janet (one of the authors of this book) in a panic. It turned out that the visitor had never been inside our museum and had no idea that most of our exhibits were participatory. We explained that the objects that *were* in cases were off limits to everyone. We asked if she wouldn't prefer to see what we did have to offer before she took legal action. She did, and we assume she was happy with us for she never sued.

Charles Again

Charles Steiner has written another more general guide about working with disabled museum visitors. It's called *Museums and the Disabled*, and is available from the Metropolitan Museum of Art, Fifth Avenue at 82nd St., New York, NY 10028.

Staff Training

The most important element in program is people. The energy which you can invest in helping your staff to meet the needs of disabled visitors will make the difference between simply fulfilling the legal requirements of 504 and making your institution a truly welcoming place for people with disabilities.

Staff training programs are relatively inexpensive but time consuming and not always easy. You will be dealing with biases and misconceptions which are deep-rooted and often subtle. If you have a high turnover rate of staff, there will be people you will never reach, and they may be the very staff members who have the greatest contact with the public. We have found, however, that staff training is worth the investment. Once a staff training program is firmly in place, information about how to deal comfortably with disabled visitors will begin to transfer naturally from one person to another.

The Wednesday Morning Training

One of the nicest things about the special needs field trip program is the opportunity it offers us to do continuous training over a long period of time. The hour-long meeting that takes place immediately after the groups have left allows us to do on-the-spot support and critique and serious discussion of teaching techniques and theory.

Designing a Staff Training Program

There are many ways to design a staff training program. Here are some elements you should keep in mind:

You will need to spend some time discussing the needs of disabled visitors with every staff member who deals with the public, from the security guard at the door, to the docent who leads the tours, without overlooking the switchboard operator — who may be the first person your visitor meets: many disabled people people call ahead. Begin by discussing basic information about each disability group. Such information is available in many of the materials we have referenced in this guide. You might also consult a special education text. We recommend *Educating Exceptional Children*, Samuel A. Kirk and Francis E. Lord, Houghton Mifflin, 1972. Or invite a special educator or other expert to present an overview to your staff. Once you and your staff have some basic information about disabilities, you can begin discussion about the ways in which staff can be helpful. You will want to talk about:

- The sighted guide technique for blind visitors
- Communication techniques for deaf visitors: sign language, speechreading, good old paper and pencil

For education staff particularly, you will want to talk about:

- Being verbally descriptive for blind visitors.
- Helping mentally retarded visitors to focus and retain attention.
- Limit setting techniques for children with behavior or attention problems.
- Things to remember when working with sign language interpreters: make sure the visitors can see both of you; make sure you

speak at a moderate pace and that the interpreters can hear you; when answering questions from the visitors, speak directly to the questioner, not the interpreter.

For security staff particularly, you will probably want to talk about:

- Firm but gentle handling of any visitor who seems to be experiencing an obvious behavioral or emotional problem.

You should also spend some time discussing the common but inaccurate stereotypes that surround each disability, and some of the inappropriate behaviors that people often display, such as talking to an ambulatory person who is with someone in a wheelchair rather than speaking directly to the disabled person. Do this gently. You will not change attitudes by preaching. You can yell later if your staff hasn't caught on.

Using a disabled consumer in your training may help immensely. They can recount personal experiences they have had as consumers and help your staff to see things from the visitor's point of view. They can answer questions about disabilities and what it is like to have one. They can provide staff with what might be their first comfortable exchange with a disabled person. They can demonstrate helping techniques such as sighted guide travel.

Questions

A difficult, but necessary step, is to help staff to articulate whatever fears they may have about interacting with people who have disabilities. How well this can be done will depend on how much time you have, and your skills as a group leader. We are not suggesting the creation of a group therapy session. Rather, people will need a nonthreatening forum in which to state their anxieties, which they may find embarrassing and difficult to share, especially in the face of your confidence and your advisors' expertise. In long-term training sessions, this kind of information should come to the surface naturally as people develop trust in you, the other people in the group, and in their own abilities. For briefer encounters, we have tried the following methods with some success:

Prior to some sessions, we asked participants to fill out anonymous questionnaires. This told us what kind of information people thought they had about disabilities, what kinds of things they wanted to know, and how comfortable they felt with disabled people. This is certainly not sure-fire, but it gave us an idea what information we needed to stress and in what areas people were most anxious. At other sessions we gave a brief introduction, and then immediately asked people to anonymously write down their biggest fear or area of concern about working with disabled visitors. We then showed a videotape, introduced a speaker, or had another leader take over the session, while the original leader went through the notes and then addressed areas of concern.

Using Consumers

You will want to think carefully about how to include disabled consumers in your staff training sessions. Our experience has led us to believe that inviting people from the disabled community is a very useful way to demystify contact between nondisabled staff and people who have disabilities. Frequently, it is the first opportunity many staff members have to meet, for example, "a real live blind person." Anyone willing to participate in such a session undoubtedly has all the necessary qualifications: a commitment to educating the nondisabled public, familiarity with all the questions that are usually raised, and a sense of humor. However, there are things you should be aware of: often, such consumers are among the most capable and articulate representatives of a disability group, and are therefore not necessarily representative of a cross-section. Although they may be talented at anticipating and dealing with the unspoken questions of your staff, their very presence can sometimes make people unwilling to express some of their more upsetting concerns and anxieties. If you do decide to include disabled people in your sessions, you may want to set aside some separate time for discussion.

PAGE 1

The Special Education group of the Children's Museum is currently developing a workshop for all staff members to become acquainted with disabled visitors' special needs. This workshop will serve as a forum for staff to voice their concerns and questions about serving visitors with disabilities. In order for us to be prepared at the workshop, we'd appreciate your answering the following questionaire. It will be completely anonymous. We thank you in advance for your cooperation.

****

1. Have you had any experience with disabled people? Did you feel comfortable or uncomfortable?

2. Do you think people with disabilities: ___have learning problems? ___feel uncomfortable around non-disabled people? ___don't want to be friends with non-disabled people?

3. Have you ever asked a disabled person, "how did it happen"?, or do you usually ignore the disability?

4. Is there anything that frightens you about people who are blind?

5. Do you think a blind person would enjoy a museum experience?

6. Do you have any questions concerning blindness you would like to have answered?

7. What is your biggest concern about contact with people who are disabled?

_____communicating with them

_____mobility, or helping them get around

_____embarassing yourself or the other person

_____being "too" helpful and over-sensitive to their needs

Generally, we found that staff were most concerned about the following things:

- When should I offer help? How should I help? How can I avoid being seen as condescending or patronizing?
- Will disabled visitors be embarrassed if I give them some special attention?
- What can I do when the nondisabled public seems uncomfortable in the presence of disabled visitors?
- What can I do about my own discomfort? Mentally retarded people frighten me. I become upset when I see people who have any kind of physical abnormality.

- What do I do in an emergency? How do I get physically handicapped people out of the building in case of fire? What do I do if someone has a seizure, or if someone gets out of control'?

And Answers

How to anticipate and answer such questions will depend to a certain extent on how much time you have, your own confidence in dealing with issues, and the style of staff/visitor interaction endorsed in your museum. At the Children's Museum, we address those questions in the following ways:

- Don't be shy about offering help. Do so whenever people look as if they might need some. If they don't, they will tell you. And don't be personally offended if this happens; you haven't failed. It's your help that's been rejected, not you.
- Ask how you should help. The visitors know what they need. Never, never push a wheelchair without being asked, and never, never lead a blind person without being asked. You can avoid being seen as patronizing and condescending by not being patronizing and condescending. This sounds like a flip remark, but we all know when we are doing this and how to stop it if we pause to think for a moment.
- If a disabled person is embarrassed by your attention, he or she will probably let you know. Pay attention to the special cues you are getting just as you would in any other interaction.
- If a nondisabled visitor seems uncomfortable in the presence of a disabled visitor, you can do one of two things: ignore it, or gently challenge the discomfort by saying something like the following: "It looks like that little boy is having a good time with the computer." Or, "Are you interested in cane travel? We have an exhibit upstairs about different kinds of disabilities that's really interesting."
- Your own discomfort will pass once you have spent some time with disabled visitors. There is nothing to be afraid of or ashamed of; just being aware of this problem is the first step in overcoming it. If anyone in the group wants to see us about problems you feel you have, we are available anytime.

Once you have identified areas of concern, gathered some information about various disabilities, documented helping strategies, and investigated museum policy as it may apply, it's useful to record this information in written form. It will be good to send people away from brief training sessions with this kind of reference material in hand, and it will be useful for orienting new employees who come on board between training sessions. If administrators or others view themselves as inappropriate recipients of training because they are not part of a direct service staff, or because they are "too busy," written materials may be a way to get them some information and keep them abreast of your efforts.

memo

DATE JUNE 5, 1980

FROM ELEANOR

TO DON GRATZ,
BILL W.,
JANET K

RE TICKET SELLING TO DISABLED VISITORS

First, thanks to all for your persistence and help in this matter, and thanks to MOT desk staff and the floor managers for making special needs visitors feel welcome in the interim confusion.

Finally, the system we've worked out should proceed as follows:

1) Persons "having difficulty with stairs" (i.e. handicapped, elderly, pregnant)* will present themselves at the Museum of Transportation desk, purchase tickets for themselves and their party and be issued a Children's Museum elevator pass.

2) Procedures for entering this transaction in the computer will be outlined in the desk manual.

* A few words about philosophy and style:
- All desk people are encouraged to use tact and discretion about helping the public to define "having difficulty with stairs". We would prefer that able-bodied persons with bulky things like strollers and carriages be encouraged to use the stairs. If necessary, staff will be glad to assist them with their articles. Please feel free at any time to call a floor manager to assist you with applying this policy. It is not our intention to upset either the patrons or the desk staff with this policy, and above all we do not want our public to go away angry.

- Also, try to remember that some handicapped children show up in strollers or carriages so we cannot assume that they are able-bodied just by looking at them. Please do not deny an elevator pass to these able-bodied people without first asking,"Is someone in your party disabled?"

- On the other hand, if someone says they have a disabled person in their party we should not question them.

Other Training Strategies

Thus far, we have talked primarily about a discussion format, but there are other training strategies you can also try. There are some films and videotapes that are good conversation starters. One that we particularly like is *A Different Approach,* which is available from Modern Talking Picture Service, Inc., 5000 Park St., North, St. Petersburg, Fla. 33709. This film is short, funny, and controversial. It quickly opens up a lot of issues that people are sometimes reluctant to discuss.

You might also try some simulation exercises, such as riding through your museum in a wheelchair, or being guided through blindfolded. Some people feel this is a pretty shopworn idea and some even find it offensive, stating, quite rightly, that there is no way to really simulate a handicap to a nonhandicapped person. However, we feel that if it is viewed as an exercise, it can open up some new awareness on the part of your staff that will be useful in your training efforts.

The most effective training programs will have a built-in support system and follow-up plan. This is an ongoing process. Try not to set up a one-shot training session that leaves your staff feeling as though there was something they somehow didn't learn, and that they are failing. The best way to do this is to be aware when disabled visitors are in your museum and to observe your staff interacting. Later, tactful criticism, praise for good work, and just listening to staff impressions will do more good than all the questionnaires, lectures, films, and exercises in the world.

Several weeks ago you participated in a training session with Janet regarding disabled visitors in the Museum. We'd like to ask you some questions about that training.

****

1) Was the staff training useful to you? In what way?

2) Since the training session, have you had any experiences that it helped you to deal with? If so, what were they?

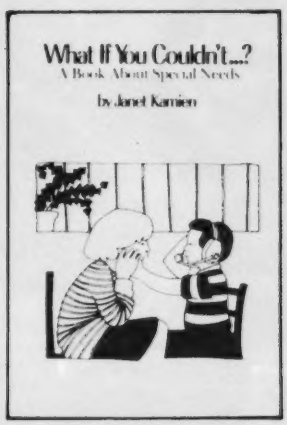
3) Do you have any questions now that you would like answered?

4) Did you find the videotape interesting? In what way?

5) We would like to meet with people who have joined us in these discussions again to find out whether or not the session has been useful. Would you be interested in a follow-up meeting?

Other Training Materials

With some self-consciousness, we hasten to recommend some materials that have been developed by Children's Museum staff as training aids. The materials and activities presented in the curriculum kit, *What If You Couldn't. . .?,* although designed for elementary school classrooms, have been used successfully by a number of museums and teacher training programs. It is available from: Selective Educational Equipment, 3 Bridge St., Newton, MA 02195.



A book, entitled *What If You Couldn't,* by Janet Kamien, is available from Charles Scribner's Sons, 597 Fifth Ave., New York, NY 10017. It is also being used in training programs for adults.

A video tape, entitled *Us and Them,* which examines three relationships between disabled and nondisabled people, is a bit more serious and provocative than the previously mentioned *A Different Approach.* For more information, write: Fred Simon, 75 Court St., Newtonville, MA 02160.

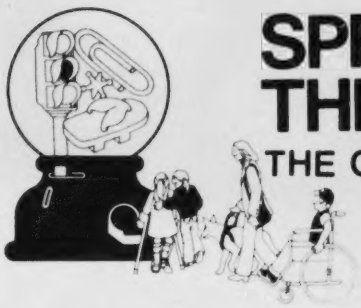
Public Relations

PR for the Nondisabled

We believe that our public relations campaign about museum accessibility is not just for the disabled audience, but for the nondisabled audience as well. This educational effort began a number of years ago with the original version of "What If You Couldn't . . ? An Exhibit About Special Needs," which grew into the previously mentioned curriculum unit and book. In the context of the current project, we have tried an experiment which we think is working very well. In every area of the museum where an adaptation exists that aids accessibility, we have put up a sign that explains its purpose. For instance, the elevator panel's special markings and height are explained in a sign next to the panel, and the accessible bathrooms have signs that explain their unique design.

So. . . you have ramped, brailled, and elevated. You have formed an advisory council. You have designed maps and recorded tapes. You have trained your staff. Now, where is the disabled audience?

The disabled members of most communities have, for so long, been unable to participate in a museum experience, that many assume a facility is inaccessible or that they are somehow unwelcome. A full-scale attempt to reach these audiences must be launched, to let them know that not only is your museum accessible, but that you welcome their patronage. The public relations department of your museum is the best place to start spreading the word.



SPREAD THE WORD...

THE CHILDREN'S MUSEUM EXPERIENCE IS FOR EVERYONE!

Since our move to Museum Wharf in July of 1979, The Children's Museum has taken advantage of the opportunity to provide a barrier-free environment in which all members of the special needs community can fully participate.

Under a grant from the Massachusetts Developmental Disabilities Council, we have had the chance to look at all accessibility issues, both building-wide and programmatic, and to reinforce our committment to provide an accessible, enjoyable visit for everyone.

We are making great strides in this project but need *YOUR* feedback to let us know if we are moving in the right direction. We welcome all comments on how effectively we are meeting your needs.

We are in the process of trying to expand our mailing list so that we may keep you informed of "What's Up" at the Children's Museum. We would appreciate your filling out the following form.

Begin by compiling a mailing list of local agencies, schools, and organizations, using your advisory council as a source of referrals. If you can afford it, a special mailing to announce physical modifications and to highlight programs and special events for this audience will draw some attention. It any case, you should mention such changes in your regular museum newsletters and press releases as well.

Displaying the access symbol on museum literature will indicate your concern for the disabled consumer and will serve to educate the general public about the importance of access. It is also a good idea to check all of your general literature to be sure that it mentions special parking areas and entrances for handicapped people and that other pertinent information, such as a TTY-TTD number, is included.

When contacting the disabled community, remember to ask for their feedback and recommendation. You should also include questions about accessibility in any formal or informal evaluation devices your institution already uses.

Don't Give Up!

Often museum staff will become very excited about designing and implementing special programs and then be crestfallen when few people appear to take advantage of it. Weak or inconsistent advertising may be to blame, but there are other possible reasons as well. If you have created your program in a vacuum, it may be that the content is simply not appealing to the audience you're trying to reach. Or, if the population of a particular disability group is reasonably small, you may be offering more programs more often than could possibly be consumed.

Remember also, that probably half of the blind members of any community are elderly. If your museum is doing any outreach to elderly people, you may want to adapt some of your programs for this particular group. Take transportation issues into consideration. If there are no public or special transportation possibilities for blind or elderly people, they may want to come but not have the means to get there.

The deaf community that exists in your area will probably have a good internal grapevine to which you should get access. Remember that information about events will probably take longer to get through that grapevine, so send your information out well in advance.

In all cases, make sure that the tours and events you are offering are of real interest to the people you are trying to serve. Remember that this audience is made up of people who may not view themselves as museum-goers, and that people who work with this audience may not view their students and clients as museum-goers. Start small, advertise big.

TTY-TDD???

TTY simply stands for 'teletypewriter' and TDD stands for 'telecommunications device for the deaf.' What is being described is any device that allows communication in written rather than verbal form over telephone lines. Many deaf people have such devices in their homes, and most agencies serving the deaf use them as well. Some of them produce "soft copy," in the form of a screen printout that vanishes as on an electronic calculator or a computer terminal. Others produce "hard copy," that is, typed copy on paper. In either case, communication between two TTY-TDD's occurs by typing rather than speaking. If you are a large museum, investigate the possibility of purchasing a TTY-TDD for your switchboard. Ask your deaf community if they think this would be a worthwhile investment. Ours cost about $500.

TTY-TDD information: Specialized Systems, Inc. (SSI), 11558 Sorrento Valley Road, Bldg. 7, San Diego, CA 92121; telephone number (714) 481-6000, TTY number (714) 481-6060.

Special Events

Advertise vigorously any tours or other events that you have developed with a disabled audience in mind. Do mailings, make phone calls to agencies, schools, individuals, and tap your regular advertising resources as well, such as newsletters, members' mailings, and Public Service announcements on local TV, radio, and in newspapers. Ask agencies that you contact to include your information in newsletters they produce. Be persistent and consistent. Remember that audience building of any variety takes a long time.

Information About Disabilities

The fantasies that many people have about disabilities are based on what they have seen and remembered from previous contacts with disabled people. These experiences, especially those vividly remembered from childhood, were often not very good. Almost everyone can remember being told by parents not to stare and not to ask questions, leaving a sense of taboo about a direct experience with a disabled person. And almost everyone can remember frightening portrayals of disabled characters in movies, books and fairy tales— Captain Hook Dr. Strangelove, Quasimodo.

When many people meet a disabled person for the first time, they immediately think about how they would behave if they had a similar disability: "I don't see how he stands it. I think I would kill myself." "I could never find my way around in the dark." "I'd be bitter and nasty." Even disabled people sometimes have similar feelings about people who have disabilities that differ from their own. Misunderstanding is compounded by the fact that each disability has a set of common stereotypes — many of which can be directly attributed to medical and educational experts — that, whether negative or positive, are not generally true: people who have Down's Syndrome are always affectionate and love music; deaf people are clannish; blind people make good musicians; mentally retarded people are dangerous.

Another problem nondisabled people face as they begin to understand anything about disabilities is the dramatic range of ability and disability in each category. One person described as mentally retarded may live independently, be married, have children, and hold down a job. Another may require constant custodial care. One person described as blind may be able to read large print, while another may have little or no sensitivity to light. A deaf person may or may not have intelligible speech, may or may not have speechreading skills, may or may not use sign language, may or may not have good reading and writing skills.

There is a natural tendency to lump people together in categories and to expect them to behave according to preconceptions about that category. But even if it is difficult to avoid labels and categories, it's important to expand our ideas of what each category means. As more is learned about specific disabilities, it is easier to challenge stereotypes and negative feelings. For many people, learning concrete information is the only comfortable first step toward gaining a broader understanding about disabilities. We have therefore included this section which gives a brief description of six different disability areas and some of the implications of a musum visit for each group.

Physical or Orthopedic Handicaps

People may experience mobility or other motor problems for a number of different reasons. Prcblems originating at birth may include birth defects, cerebral palsy, and muscular dystrophy. Cerebral palsy is a blanket term that indicates that there has been damage to the central nervous system resulting in motor and possibly sensory problems. Since such damage is irreparable, conditions usually get neither better nor worse. The manifestations of this damage can be mild or severe. Muscular dystrophy is a group of many progressive disorders whose major characteristic is the gradual wasting away of muscles.

Physical disabilities usually acquired later in life include mild or severe motor problems resulting from diseases such as polio, loss of limbs from accident or disease-related amputation, and spinal cord injury resulting in varying degrees of paralysis. Generally speaking, people who have mobility or other motor problems are usually credited with much less physical ability than they actually have, and are considered much more physically fragile than they actually are.

If you have taken care of the accessibility issues facing people who use wheelchairs, and you have provided rest areas and elevator service for people who have difficulty with stairs, the problem that remains for the physically disabled is your attitude about what they can and cannot do. The most important message for your staff to hear in the case of this and every other disability is that the person who has the disability is an expert! If you have any questions about what visitors can or cannot physically do, or whether they need help, the only people equipped to answer that question are the people with the disability. If they look like they need help, ask them! If they say no, don't be personally offended. If they want some help, and you don't know how to give it, ask them! They will tell you if they want their wheelchair pushed, or if they need help reaching the item they want to buy in the shop.

Visual Impairments

Visual impairments encompass a wide range of ability and disability. Someone who is described as legally blind may be able to read large print and do without mobility aids in many or all situations. He or she may be able to perceive not only light and dark but colors as well. On the other hand, a person described as legally blind may have none of these abilities.

Most of us tend to lump several visual impairments into one problem and one solution because this is easiest, but unfortunately it does not work. In addition to the range of skills dependent on how much and what kind of vision was lost, there is also the range of skills dependent on when vision was lost. People who lost their sight at birth probably have skills in reading braille and tactile orientation materials which

people who lost their vision later in life may not have. However, people who lost their sight later in life probably have a storehouse of visual memories of color and scale, and concepts of visual constructs like reflection and symmetry that someone blind from birth doesn't have. It is impossible to generalize.

But it is possible to generalize the stereotypical behaviors that many sighted people display when confronted with a blind person.

People tend to shout, as though the blind person were deaf as well.

People tend to speak to a blind person through a third party, in the way they often to speak to children: "Does he want another glass of milk?" Obviously, someone who is blind is perfectly capable of dialogue without an interpreter.

People tend to avoid using words such as "look," "see," "blind alley," etc., when speaking with a blind person. This takes a lot of totally unnecessary effort and makes the process of conversing very awkward.

People hesitate to aid a blind person, or, if they try, become offended if their help is refused. Or they don't ask how they might be helpful, they just grab an arm or a cane and go to it! It is advisable to first ask what the blind person needs or where he or she wants to go. Generally speaking, the best way to serve as a sighted guide is to offer your arm and walk about a half step in front of the person you are guiding. Although in this way the guided person will be able to feel you go up a curb or stair first, you should also mention obstacles and elevations as you approach them.

People forget to be descriptive enough in their explanations, or find themselves feeling too awkward to give a description in the first place. They also neglect to announce their identities and forget to mention that they have come into a room or that they are leaving. All of these behaviors tend to make social interactions awkward and sometimes serve to further isolate people who are blind.

Hearing Impairments

Hearing impairments can be even more confusing in the range of ability and disability that exist. Most people have heard of speechreading and sign language, and know that being deaf does not necessarily mean that one is "mute." However, many people seem to go "blank" when first confronted with an individual whose communication skills have been affected by deafness.

The most devastating stereotype is the suspicion on the part of hearing people that deaf people cannot understand something because

they are *incapable* of understanding, rather than realizing that it is the communication tools that are at fault. Closing the communication gap between a deaf and a hearing person can be accomplished by some effort and a little common sense.

Many deaf and hard-of-hearing people are adept at speechreading. The speaker can greatly improve matters by doing a few simple things:

- Look at the person as you speak. Don't put your hands in front of your mouth or speak with food or a cigarette in your mouth.
- Don't overenunciate. A natural movement of the lips and tongue is preferable.
- Speak in short, simply constructed sentences. If a phrase or word is not understood, try repeating it using different words.
- Don't shout. If the person is profoundly deaf, it won't help a bit anyway. For a person who is wearing a hearing aid, a slightly louder voice may help, but shouting can actually hurt the person's ears and make it more difficult to understand what is being said.
- Don't be afraid to use gestures to help get your point across.

Although a deaf person may be quite good at understanding you, you may have trouble understanding them. One of the results of profound deafness from an early age is that the deaf person may never have heard his or her own voice and therefore have a very difficult time learning to speak well. Some people who have profound deafness can be understood quite easily, others not. In this event, if speech and gesture have failed, paper and pencil communication should also be tried.

Mental Retardation

The range of ability and disability in people described as mentally retarded is probably more dramatic than in any other disability area. The level of apprehension and misconception by the general public is also dramatic. For most retarded people, it is not the ability to learn that has been curtailed, but the speed and ease with which things are learned.

Many of the retarded visitors to our museum are readers and talkers, obviously enjoying their experience, obviously grasping the concrete information and some of the more abstract information as well. Other retarded visitors have few communication skills. We may understand what they are enjoying from a few laughs or smiles and excited exclamations, but we really have little idea of what they are "getting" from the experience, except that they are having a good time. Some of our retarded and multiply-handicapped visitors are able to offer us no feedback at all. They may even appear upset and unhappy. However,

since we have no way to know what any visitor is going to gain from our museum, we must take all visitors' experiences seriously.

Mildly to moderately retarded children will not usually behave very differently from their peers except for a more or less obvious delay in cognitive development. They may be interested in things that are age-appropriate for younger people, and some social skills may be below age level as well. Although it is important to provide experiences which will be appealing, it is equally important not to assume or behave as though a retarded visitor's personality or emotional needs are really those of a much younger person, because this simply may not be true. The learning style of a retarded person can be generalized as more concrete, more repetitive, and possibly less focused than a nonretarded peer. But emotional life, sense of humor, and sensitivity to others may be much more sophisticated than cognitive development would lead one to believe.

For severely and profoundly retarded visitors, the question most asked is, what can they possibly be gaining from a museum experience? Our answer is, frankly, that we don't know. Since we do know that stimulation and new experiences are the first steps to new learning, this is not a question we can concern ourselves with.

For museum educators, the important ideas are:

- Don't underestimate the potential of any visitor.
- Focus attention by presenting appealing ideas and activities. If something isn't working, don't be afraid to change teaching strategies and move to the next thing.
- Be clear and concrete about your expectations of behavior, both in terms of the rules of the institution and directions for activities. Be repetitive if necessary. Notice and support appropriate behavior.
- Allow visitors to work with ideas at whatever cognitive level seems appropriate.
- Do not patronize your audience.

Learning Disabilities

Learning disabilities is a blanket term used to describe almost any kind of learning problem that cannot be described as retardation or a behavior problem. Generally, such disabilities arise from visual or auditory perception problems. This means that a child's hearing and vision are functioning properly, but that the message is not sorted properly once it is received.

Learning disabilities do not usually present much of a problem in a museum visit, but there are several things to be aware of:

- Reading skills may be poor. Make sure that a good visit is not totally dependent on reading.
- Attention spans may be short, especially in settings that are visually confusing and noisy.
- Some severely learning disabled children may be "hyperactive." Make your expectations of behavior and pace clear and concrete.

Emotional Problems

Many of the issues surrounding museum visits by children and adults with emotional problems are similar to concerns about mentally retarded visitors: is the visit appropriate? what is the child or adult learning? what behavior can be expected? But an additional concern is often voiced by museum staff: what can I do if an incident happens? how should I respond to bizarre out-of-control behavior?

During the past ten years at the Children's Museum, we have been visited by hundreds of adults and children with emotional problems, most often in groups but occasionally alone or with families. In that time, we have sometimes had to enlist the support of a group leader when a visitor was behaving inappropriately and we have had to train our staff to deal firmly with difficult situations, but there have been no serious incidents, no injury to staff or visitors, no damage to the museum facility.

Generally speaking, incidents when visitors behave in a strange or inappropriate way will be very rare. Your staff may need some guidance, however, in dealing with the few situations which might arise. Most importantly, they should know how to look for assistance, either from another staff member or from counselors and teachers who usually accompany most groups in large numbers. Group leaders are usually very skillful at dealing with difficult behavior and are especially concerned that people in their group have a successful visit. It is also important that the rules of behavior be stated very clearly before any visit begins, and that staff be prepared to deal gently but firmly with any behavior that is inappropriate in your museum.

Seizures

Although there are usually no more medical problems for disabled people than there are for able-bodied people, your staff should probably receive some instruction in what to do if a visitor should have a seizure. If your museum does not already have guidelines for assisting someone who has had a seizure, we offer the following suggestions:

- If a person begins to fall in your presence, try to block the fall, so injury doesn't occur.

- Once the person is on the floor and having the seizure, try to get furniture, people, etc. out of the way. If there is something handy, like a shirt or sweater, place it under the head.
- Do not attempt to hold the person's body or limbs down during the seizure. Do not attempt to place anything in the person's mouth.
- Saliva may collect in the mouth. If possible try to turn the head gently to the side to allow this to drain onto the floor.
- When the seizure is over, the person may want to find a quiet place to rest, a bathroom, or may simply want to leave. Help the person to do what he or she wants and try to secure as much privacy as possible.

Affirmative Action Hiring

The issues surrounding the hiring of disabled people to work in museums are similar to those involving affirmative action for any other minority group. The same concerns about "tokenism," the persistent problem of offering salaries competitive with the marketplace (we all know how noncompetitive museum salaries can be), and the effort that must be expended to find applicants all apply. But there *are* qualified people with handicaps in every community who can capably fill a variety of positions in your museum and there are ways to find them.

Finding Applicants

A good place to begin is with your organization's official policy on affirmative action hiring. If you have a personnel policy guide, make certain that people with handicaps are included in any statement on affirmative action. If there is a list of agencies or community newspapers which customarily receive notice of job openings, add the names of agencies that serve disabled people. If you have a personnel director, get together to discuss strategies for finding qualified applicants. If you don't have a personnel director and several staff are responsible for hiring, meet with them to formulate a consistent plan for getting notices of job openings out to places where people with disabilities will see them.

You may want to consider appointing a "friendly watchdog" on your staff who can follow through on whatever plan you devise. Establishing a network of people to contact, rather than simply relying on posting openings, is very important, and having one staff member who is responsible for nurturing these contacts is equally important. Your advisory council should be able to help you set up such a network.

When you examine your staffing patterns to look at possibilities for hiring people with disabilities, you shouldn't forget to include positions at all levels. Internships, training and volunteer positions, as well as paid permanent staff positions, should be studied.

Legal Requirements and "Reasonable Accommodation"

The federal legislation which mandates physical and programmatic accessibility to institutions receiving federal funds also requires affirmative action to employ *qualified* handicapped people. The law states that employers are required to make "reasonable accommodation," but just what this means is subject to various interpretations.

Clearly, staff work spaces should be as physically accessible as

Interviews:

We interviewed some people with disabilities who work or have worked in museums to see what they thought:

Maria:
Maria Russell is the switchboard operator at the Children's Museum. When she was hired, she remembers feeling as though she was being seen not only as a token 'handicapped person,' but as a token woman, a token minority *and* a token Hispanic. (Maria is Cuban and speaks Spanish.) She felt she was pampered at first, because of her disability, and she didn't like that because she wants to be looked at as a person — not a *disabled* person or *special* person. In the time she's been here she feels she's proven herself to everyone, and changed people's attitudes. We think so, too.

Roger:
Roger Cicchese is the Executive Director of the Mayor's Commission on the Physically Handicapped in Boston, and is a member of our advisory council. He used to work at a science museum and has strong opinions on the subject of disabled people and museums. Roger felt that he had been consciously hired as a disabled person. (Roger is blind.) The administration originally asked him to work on programs for blind people, but Roger insisted that he work with all disability groups. Roger felt that; although the supervisory support was good, he couldn't get very far because top administration was not supportive of his efforts. He feels that this is true in general in the museum community; that educators usually know what to do and are ready to do it, but that administrators need, and are going to get, a rude awakening. He feels that the time is coming when disabled peo-

ple will lose patience and begin to file lawsuits. However, he believes that when approaching administrators, it is not humanitarian concerns or fear of lawsuits that should be stressed, but rather the increase in audience, the new monies that can be generated, and the great publicity that's possible. "There is money out there for these projects," says Roger. "Are you smart enough to get it?"

Hang:
We interviewed Hang Lee, who is fifteen years old and works in the business office of the Children's Museum through a youth employment program. We asked him what it was like to work here. Hang thought it took people a few days to figure out he was capable and to get over his disability. (Hang has cerebral palsy but doesn't use any mobility aids.) He thought this all happened fairly quickly because some of the people he worked with were willing to talk about his disability. Hang said that sometimes the work he gets isn't hard enough, and wonders if this is because he is a temporary employee, or because he is handicapped.

Fred:
Fred Simon invents and maintains video exhibits at the Children's Museum. We asked him what it was like to be a disabled employee:

"When I was first hired, people thought I was a 'flake.' When they asked me how I was, I would smile and say 'sometimes.' They didn't know I was hard of hearing. I didn't tell them because I was afraid I'd be fired. I was also afraid I wouldn't hear them fire me, and would continue to work at a place where I was no longer employed. After several years, people figured out I was hard of hearing. Now they realize that I am 'flakey' in part because I am hard of hearing."

public spaces. Some modification of job descriptions may be helpful. It may even be necessary to redefine tasks in order to create a new position for someone who is disabled. But the first step, and the simplest one, is to ask an applicant what he or she needs to do the job. Limitations which you perceive may not, in fact, present any problems.

Employers faced with the prospect of hiring disabled workers often express concern about increased insurance and workmen's compensation costs, safety, absenteeism, and job performance. A number of U.S. Department of Labor studies have shown that these concerns are completely unfounded. An excellent source of publications about employing people with disabilities which refute most myths about disabled workers and present good examples of reasonable accommodations that employers can make is the President's Commission on Employment of the Handicapped, Washington, D.C. 20210.

Vocational rehabilitation agencies are also a good resource. They can help locate applicants, they can occasionally provide direct subsidies and furnish equipment, and they can let you know how other institutions have successfully accommodated and employed people with disabilities.

Acknowledgments

We owe a very special thanks to the following members of our Advisory Council, who generously gave time to this project, filled out reams of questionnaires and attended too many evening meetings to mention.

Betsy Anderson: Resource parent for the Federation for Children with Special Needs

Nancy Becker: Instructor, Northeastern University, American Sign Language Department

Ray Bloomer: National Park Service, training of interpretive staff in special education; expert in issues concerning people who are blind

Dr. Robert Brooks: Director of out-patient child psychology and psychoeducational services, Hall-Mercer Children's Center of McLean's Hospital; faculty of Harvard Medical School

Dr. Allen Crocker: Project Director and director of pediatrics, senior associate in medicine, Children's Hospital Medical Center; associate professor of pediatrics, Harvard Medical School

Karen Daly: Registered nurse, MSN, child and family therapist, Dorchester Mental Health Center; disabled consumer

Dr. Fred Fay: Associate project director of rehabilitation, research, and training center of Tufts, New England Medical Center

Derick Fay: Son of Dr. Fred Fay, concerned with issues of accessibility

Lawrence Goldberg: A representative of The Mohawks and Squaws

Sarah Gregory-Smith: Teacher, musician, visually impaired resource person

Vicki Hamill: Parent of a disabled child, worked in mainstreaming project at the Trotter School

Bill Huston: Special services in deafness for Massachusetts Rehabilitation; communication specialist/counselor

Lynda Kennedy: Guardian of a young adult from the Fernald School; specializes in home care, Boston Children's Service Association

Cynthia Plum: Generic teacher, Hemenway School

Fred Simon: exhibit developer; currently working on a videotape concerning relationships between disabled and nondisabled persons; disabled consumer

Michael Talbot: Assistant superintendent, Cotting School for Handicapped Children

David Wizansky: Supervisor of department of youth services counselors at Dare, Inc.; advisor to The Mohawks and Squaws.

Special thanks to the following:

Michael Spock and Elaine Gurian: the people who create an environment in which it can happen

All staff at the Children's Museum, but especially Eve Scherr, Jonathan Hyde, Anne Tribble, Suzanne LeBlanc

Eleanor Chin, Chris Sullivan, Klare Shaw, Terri Heanue, Maureen Murray, Natalie Faldasz, desk and exhibit staffs: the people who make it work

The Wednesday Morning groups: the people who taught us what we know

Stephen Calcagnino: exhibit designer and advocate for the disabled in our design department.